

# Delinquency and problem behavior intention among early adolescents in Hong Kong: profiles and psychosocial correlates

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## Abstract

Delinquency and problem behavior intention were examined in 3328 secondary one students in Hong Kong. Over 60% of the respondents had cheated and spoken foul language over the past year, but majority had never engaged in other problem behaviors, such as sexual intercourse, staying outside their home overnight, gang fighting, and truancy. A significant proportion of the respondents would attempt to engage in delinquent behaviors in the coming 2 years, including drinking alcohol and gambling. Males reported higher levels of delinquency and problem behavior intention than did females. Higher family functioning, academic competence, pro social attributes, and general positive youth development predicted a lower likelihood of delinquency and problem behavior intention. These results shed light on the importance of early intervention work at individual, school, and family levels.

**Keywords:** behavioral intention to engage in problem behavior; Chinese adolescents; delinquency; risk behavior.

## Introduction

During adolescence, young people have to face both physiological and psychological changes, search for self-identity, and struggle for independence. Hall (1, 2) described this stage as “storm and stress”. Facing these developmental changes, there is a tendency for adolescents to have conflicts with their

parents, disrupted moods, and increased propensity for reckless and problem behavior (2). Youth problem behavior can be regarded as a part of the growth process or an indicator of a long-term trend of criminal activity (2). In view of its potential harmful impacts on the individual, family and community, intervention is necessary to provide support adolescents before problem behavior occurs. In relation to this, youth programs that address risk and protective factors in delinquency can be developed through the examination of prevalence and psychosocial correlates of youth problem behavior.

Problem behavior theory is commonly used to understand the nature and development of youth problem behavior (3). This theory encompasses three major dimensions of the individual system: an individual's personality, perceived environment, and behavior. The likelihood that problem behavior would occur is specified by the proneness of each dimension, a dynamic state reflecting either instigations to problem behavior or controls against it (3). The personality dimension includes a set of personal characteristics, such as value of achievement and self-esteem. The perceived environment dimension refers to the proximal and distal social influence factors, such as family and peer orientation and expectations regarding problem behavior. The behavior dimension consists of the degree of involvement in other problem behaviors and conventional behaviors, such as church and school attendance.

Many researchers have used the problem behavior theoretical framework to examine youth delinquency. In the personality dimension, researchers found that low self-esteem, hopelessness, low sense of mastery, avoidance coping, aggression, and impulsivity were associated with youth problem behavior (4–6). In particular, Barber (5) pointed out that externalizing personality traits (e.g., aggression, impulsivity, and rebelliousness) are related to externalizing problems (e.g., substance use and delinquency), while more internalizing personality characteristics (e.g., social isolation, hopelessness, and self-hatred) are associated with internalizing problems (e.g., depression, suicide, and eating disorders). In the perceived environment dimension, family is regarded as “the single influential childhood factor in buffering the child and in shaping later adaptation” (7). Western studies showed a wide range of adverse family conditions, such as the lack of parental supervision, low parental attachment, poor parenting practices, parents' deviant behavior and attitude and parental separation, are related to youth problem behavior (8). This is further supported by a study, which showed that students with better supervision and support from parents are less likely to engage in problem behavior than their counterparts under adverse family conditions (9). Finally, in the behavior dimension, numerous studies have revealed that the tendency to

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drop out of school is strongly correlated with problem behavior (4, 10). Eccles (10) asserted that age-related increase in such negative motivational and behavioral characteristics as test anxiety, learned helplessness, truancy, and tendency to drop out of school made adolescents prone to problem behavior. To delay the onset of delinquency, it is important to understand the prevalence, as well as risk and protective factors, of problem behavior in early adolescence.

Furthermore, previous studies mainly focused on examining psychosocial factors of students' past problem behavior. Several social-psychological models (e.g., theory of reasoned action, theory of planned behavior, and protection motivation theory) have highlighted the individual's intention to perform certain behavior as an important predictor to actual behavior (11–13). Against this background, researchers began to investigate the role of behavioral intention in adolescent problem behaviors, such as sex and drug use (14–16). However, there is a paucity of research examining the relationship between problem behavior intention and psychosocial correlates of youth delinquency.

Despite the vast literature on adolescent risk behavior in the West, there are comparatively fewer studies in Chinese contexts. In Hong Kong, the patterns of youth problem behaviors, such as smoking, substance abuse, physical violence, sexual activity and gambling, have been examined (17–23). Similar to Western studies (4, 9, 10), age-related increase in delinquency has also been found (20, 21). Moreover, the findings are related to the three dimensions of the problem behavior theory. In the personality dimension, poor psychosocial competencies, lower life satisfaction, and poor self-concept are also correlated with problem behavior (21–23). In the perceived environment dimension, studies (18, 21, 24) have found that adolescents with a more negative family environment, including negative parenting styles, poor family functioning, lesser family involvement, more parent-child conflicts and family violence, reported more problem behaviors. In the behavior dimension, youth problem behavior is indicated by their negative perception of school and examination pressure, academic performance, teachers and classmates (18, 21). Specifically, lack of school bonding predicted students' problem behaviors at school (18).

Compared with Western findings, Hong Kong adolescents appeared to report lower rates of problem behavior (17–21, 25, 26). These differences might be related to the stress of familism and academic achievement in the Chinese culture, which contribute to stronger buffers at family and school levels (27). Shek (24) commented that emphasis on familism and harmony within the family in Chinese societies might reduce the negative impact of a poor family environment on adolescent development. Given that academic performance is the most pressing concern of Hong Kong students (28–30), they might attach stronger personal value on achievement and, perhaps, stronger school bonding, leading them away from problem behavior. Therefore, it seems that Chinese societal norms of filial piety and academic achievement may provide Hong Kong adolescents with stronger protective power in terms of the personality, perceived environment, and behavior dimensions against delinquency. In view of the possible

cultural differences on the influence of psychosocial correlates, more research in the Chinese context is needed.

The current paper has two objectives. First, we aim to report the descriptive profiles on delinquency and behavior intention to engage in problem behavior among Chinese Secondary One students. Second, we present our findings regarding the relationships among psychosocial correlates (e.g., basic demographic factors, positive youth development qualities, family functioning, and academic competence), along with the delinquency and problem behavioral intention.

## Methods

The present study is part of a large longitudinal study aiming at tracking the developmental trends of different positive youth development indicators and risk behaviors among Hong Kong adolescents over time. A total of 28 secondary schools in Hong Kong were randomly selected to participate in the study. Data regarding delinquency and problem behavior intention collected at Wave one are reported in this paper.

## Participants

A total of 3328 secondary one students participated in the study. The mean age of the participants was 12.59 years ( $SD=0.74$ ); these included 1719 boys, 1572 girls, and 37 students who did not indicate their gender. While most students were born in Hong Kong (78.1%), 19.9% came from Mainland China, followed by 2.0% who came from other places. The demographic information of the participants is summarized in Table 1.

## Procedures

In the school year of 2009–2010, the participants were invited to respond to a comprehensive youth development questionnaire, which included both existing instruments and scales developed by the first author. The questionnaire survey was conducted by a trained research assistant in classroom settings with standardized instructions. At each measurement occasion, the purposes of the study were introduced, and confidentiality of the data collected was repeatedly emphasized to all participants. School, parental, and student consent were obtained prior to data collection. Participants responded to the questionnaires in a self-administered format. The research assistant was present throughout the administration process in order to answer possible questions from the participants.

## Instruments

Participants were invited to respond to a composite questionnaire that comprised questions about demographic information, participants' family environment, different measures of youth development constructs and problem behavior. With reference to the objectives of this study, the scales used to assess delinquency, positive youth development, school adjustment, and family socio-economic status are described below. The internal consistency of each measure and correlations among them are shown in Table 2.

**Delinquency scale** This scale comprised 12 items that assessed the frequency of delinquent behaviors of the participants in the past 1 year, including stealing, cheating, truancy, running away from

**Table 1** Demographic information of the respondents (n=3328).

	n	%
Gender		
Male	1719	52
Female	1572	48
Place of birth		
Hong Kong	2590	78
Mainland China	655	20
Others	64	2
School location		
Hong Kong Island	5	18
Kowloon	7	25
New Territories	16	57
Parents' marital status		
Divorced	209	6
Separated	73	2
First marriage	2781	84
Second marriage	129	4
Others	104	3
Parents' employment status		
Both parents are employed	1643	57
Either father/mother is employed	956	33
Both parents are unemployed	305	11
Receiving financial aids		
Yes	225	7
No	2606	79
Others	465	14

home, damaging others' properties, assault, having sexual intercourse with others, gang fighting, speaking foul language, staying outside the home overnight without parental consent, bullying or harassing others, and trespassing (31). Respondents rated the frequency of these behaviors in the past half year on a 6-point Likert scale (0=never, 1=one to two times; 2=three to four times; 3=five to six times; 4=seven to eight times; 5=nine to ten times; 6=more than ten times).

**Problem behavior intention scale** Five items were used to assess the participants' behavioral intention to engage in problem behaviors, including drinking alcohol, smoking, taking drugs (ketamine, cannabis, or ecstasy), having sex with others, and gambling. Respondents were asked to rate the likelihood that they may engage in these problem behaviors in the next 2 years on a 4-point Likert scale, with "0" representing "never", "1" representing "not likely", "2" representing "likely", and "3" representing "definitely".

**Chinese positive youth development scale (CPYDS)** The CPYDS consists of 15 subscales listed below.

1. Bonding Subscale (three items)
2. Resilience Subscale (three items)
3. Social Competence Subscale (three items)
4. Emotional Competence Subscale (three items)
5. Cognitive Competence Subscale (three items)
6. Behavioral Competence Subscale (three items)
7. Moral Competence Subscale (three items)
8. Self-Determination Subscale (three items)
9. Self-Efficacy Subscale (two items)
10. Beliefs in the Future Subscale (three items)
11. Clear and Positive Identity Subscale (three items)
12. Spirituality Subscale (three items)
13. Pro social Involvement Subscale (three items)

14. Pro social Norms Subscale (three items)

15. Recognition for Positive Behavior Subscale (three items)

Based on factor analyses, Shek and Ma (32) proposed that the 15 subscales in the CPYDS could be further reduced to four dimensions:

- Cognitive-Behavioral Competencies (CBC): Scale score can be calculated by averaging scores on Cognitive Competence Subscale, Self-Determination Subscale, and Behavioral Competence Subscale.
- Pro social Attributes (PA): Scale score is equated to the mean scores of Pro social Involvement Subscale and Pro social Norms Subscale.
- Positive Identity (PIT): Scale score is computed by averaging scores of Beliefs in the Future Subscale and Clear and Positive Identity Subscale.
- General Positive Youth Development Qualities (GPYDQ): Scale score is equated to the mean scores of Resilience Subscale, Social Competence Subscale, Self-Efficacy Subscale, Moral Competence Subscale, Bonding Subscale, Recognition for Positive Behavior Subscale, Spirituality Subscale, and Emotional Competence Subscale.

**Chinese family assessment instrument (CFAI)** The Chinese Family Assessment Instrument (CFAI) was used to assess perceived family functioning. In the present study, three subscales, including mutuality (mutual support, love, and concern among family members), communication (frequency and nature of interaction among family members), and conflicts and harmony (presence of conflicts and harmonious behavior in the family) were examined. The five response options were "very similar", "somewhat similar", "neither similar nor dissimilar", "somewhat dissimilar", and "very dissimilar". A higher total score on the subscales indicated a higher level of positive family functioning. The reliability and validity of the CFAI have been supported by previous studies (33–36). Furthermore, multi-group confirmatory factor analyses (MCFA) demonstrated the existence of two higher order factors (i.e., family interaction and parenting) and factorial invariance of the CFAI across gender and subgroups (37).

**Academic and school competence scale (ASC)** As a relatively independent positive youth development construct, participants' academic and school competence (ASC) were measured using three items. For the first item, participants were required to rate their perceived academic performance as compared with other peer students on a 5-point Likert scale, with "1"="very poor", "2"="below average", "3"="average", "4"="above average", and "5"="very good". The second item asked the extent to which the respondents were satisfied with their academic performance ("1"="very dissatisfied", "2"="dissatisfied", "3"="neutral", "4"="satisfied", and "5"="very satisfied"). The last question asked the participants to rate their conduct in school on a 5-point Likert scale ("1"="very poor", "2"="below average", "3"="average", "4"="above average", and "5"="very good"). The ASC scale score was calculated by averaging the item scores and then identifying them within the range of 1–5; high scores represent high academic and school competence.

### Data analytic plan

Descriptive analysis was run to show the picture of delinquency and problem behavior intention among Hong Kong early adolescents. Mann-Whitney U-tests were used to examine gender and socio-economic differences on two dimensions. Further, to investigate whether gender, age, immigration status, family economic status,

**Table 2** Descriptive statistics, internal consistency, and correlations among variables.

	M (SD)	$\alpha$ (mean) <sup>a</sup>	Delinquency	Problem behavior intention
			<i>r</i>	<i>r</i>
Delinquency	0.39 (0.47)	0.70 (0.25)	—	0.50 <sup>b</sup>
Problem behavior intention	0.26 (0.39)	0.64 (0.36)	0.50 <sup>b</sup>	—
Academic and school competence	3.12 (0.67)	0.67 (0.40)	−0.21 <sup>b</sup>	−0.17 <sup>b</sup>
Positive youth development				
CBC	4.45 (0.75)	0.82 (0.61)	−0.21 <sup>b</sup>	−0.15 <sup>b</sup>
PA	4.50 (0.89)	0.74 (0.59)	−0.35 <sup>b</sup>	−0.25 <sup>b</sup>
GPYDQ	4.58 (0.71)	0.88 (0.48)	−0.34 <sup>b</sup>	−0.26 <sup>b</sup>
PIT	4.24 (0.96)	0.82 (0.69)	−0.23 <sup>b</sup>	−0.15 <sup>b</sup>
Family functioning				
Mutuality	3.89 (0.89)	0.87 (0.70)	−0.29 <sup>b</sup>	−0.23 <sup>b</sup>
Harmony	3.81 (0.92)	0.76 (0.51)	−0.25 <sup>b</sup>	−0.23 <sup>b</sup>
Communication	3.51 (1.01)	0.81 (0.59)	−0.31 <sup>b</sup>	−0.23 <sup>b</sup>

CBC, cognitive-behavioral competencies second-order factor; PA, pro social attributes second-order factor; GPYDQ, general positive youth development qualities second-order factor; PIT, positive identity second-order factor. <sup>a</sup>Mean inter-item correlations. <sup>b</sup> $p < 0.01$ .

family functioning, academic and school competence, and positive youth development are predictive of adolescent delinquency and problem behavior intention, multiple regression analysis was performed. A total of fourteen independent variables were divided into five blocks for analysis. Students' basic demographic factors (i.e., age and gender) were entered in the first block; their socio-economic background variables (i.e., immigration status and family economic status) were entered in the second block; their family functioning, including family mutuality, communication, and harmony were entered into the third block; their personal psychosocial attributes (i.e., ASC, CBC, PA, PIT, and GPYDQ) were entered into the fourth block; their total scores in the items Chinese positive youth development and Chinese family functioning were entered into the fifth block of the regression model.

## Results

As shown in Table 3, smoking and speaking foul language were two popular delinquent behaviors that secondary one students had exhibited over the year. Over 60% of the respondents reported that they had cheated and spoken foul language, of which around 12%–25% had exhibited such behaviors seven times or above in the past year. Apart from these two behaviors, consistent with the prior literature, Hong Kong students' rate of delinquency was generally lower than their counterparts in the West (25, 26). Over 84% of the respondents had never displayed any other delinquent behaviors. In particular, 99.3% of them had never had sexual intercourse with others. Similarly, the respondents had shown low intention to engage in problem behavior in the coming 2 years. Over 91% of students reported that they would not smoke, take drugs, and have sexual intercourse with others (Table 4). However, it should be noted that nearly one-third of the respondents showed intention to drink alcohol, and around 8% of them would gamble.

## Gender differences

Gender, immigration, and family economic status were examined with Mann-Whitney U-test. As shown in Table 5,

significant differences were found in gender. Males (mean rank=1597.12) had a higher level of delinquency than females (mean rank=1484.15) ( $U=-3.55$ ,  $p=0.00$ ). Males (mean rank=1680.82) also reported a higher level of problem behavior intention than did females (mean rank=1573.84) ( $U=-3.51$ ,  $p=0.00$ ).

## Correlates and predictors of delinquency and problem behavior intention

Analyses based on Pearson correlation showed that academic and school competence, positive youth development, and family functioning measures were all negatively correlated (ranging from −0.15 to −0.35) with delinquency and problem behavior intention. In general, higher levels of academic and school competence, positive youth development, and family functioning were related to lower levels of past and future problem behavior (Table 2).

**Table 3** Percentage of respondents with delinquent behavior.

Delinquent behavior in the past year	Never, %	One to six times, %	Seven times or above, %
Stealing	89.9	9.6	0.5
Cheating	39.2	48.4	12.4
Truancy	96.7	2.9	0.4
Running away from home	96.0	3.8	0.2
Damaging others' properties	86.5	12.6	0.8
Assault	88.3	10.3	1.4
Having sexual intercourse with others	99.3	0.6	0.1
Gang fighting	96.7	2.9	0.4
Speaking foul language	30.7	44.7	24.6
Staying outside the home overnight without parental consent	97.0	2.4	0.6
Strong arming others	84.4	13.3	2.3
Trespasses	96.2	3.4	0.3



**Table 4** Percentage of participants with intention to engage in problem behavior.

Intention to engage in problem behavior in the next 2 years	Never, %	Not likely, %	Likely, %	Definitely, %
Drinking alcohol	55.7	15.6	22.8	5.8
Smoking	91.6	4.8	2.6	1.0
Taking drugs	97.6	1.5	0.5	0.4
Having sexual intercourse with others	93.5	4.1	1.8	0.6
Gambling	82.8	8.9	6.3	2.0

Regression analysis results are presented in Table 6. Age, gender, family harmony and communication, academic and school competence, as well as all positive youth development measures were significant predictors of both delinquency and problem behavior intention. Older and mainland immigrant males who had poor academic and school competence, family functioning, and psychosocial attributes were found to be likely to engage in problem behavior. Despite the significant results, all five models only accounted for 0%–16% of past delinquency and 1%–11% of future problem behavior intention; moreover, while students' socio-economic background predicted the least, their personal psychosocial attributes predicted the most behavior intention. It is also noteworthy that second-order factor CBC and second-order factor PIT positively predicted students' delinquency and problem behavior intention.

## Discussion

This paper presents findings on the descriptive profiles of delinquency and problem behavior intention among Hong Kong Secondary One students. Consistent with previous studies, Hong Kong adolescents reported lower rates of problem behavior than did their counterparts in the West (17–21, 25, 26). In particular, almost all of the students had never had sexual

**Table 5** Mean rank differences among delinquency and problem behavior by gender, immigrant status and family economic status.

	Delinquency		Problem behavior intention	
	Mean <sup>a</sup>	U	Mean <sup>a</sup>	U
Gender				
Male	1597.12	–3.55 <sup>b</sup>	1680.82	–3.51 <sup>b</sup>
Female	1484.15		1573.84	
Immigration status				
Hong Kong	1539.47	–1.61	1625.31	–1.93
Mainland China	1602.00		1696.41	
Receiving financial aids				
No	1319.78	–1.34	1405.83	–1.29
Yes	1393.70		1338.58	

<sup>a</sup>Mean rank. <sup>b</sup>p<0.01.**Table 6** Regression analyses based on individual- and family-related factors.

Predictor	Delinquency			Problem behavior intention		
	R	R <sup>2</sup>	β <sup>a</sup>	R	R <sup>2</sup>	β <sup>a</sup>
Age			0.08 <sup>b</sup>			0.11 <sup>b</sup>
Gender <sup>c</sup>			–0.08 <sup>b</sup>			–0.06 <sup>b</sup>
Model	0.11	0.01		0.13	0.02	
Immigration status <sup>d</sup>			0.03			0.07 <sup>b</sup>
CSSA <sup>e</sup>			0.01			–0.03
Model	0.03	0.00		0.07	0.01	
Mutuality			–0.06 <sup>f</sup>			–0.05
Harmony			–0.11 <sup>b</sup>			–0.14 <sup>b</sup>
Communication			–0.21 <sup>b</sup>			–0.12 <sup>b</sup>
Model	0.33	0.11		0.27	0.07	
ASC			–0.09 <sup>b</sup>			–0.11 <sup>b</sup>
CBC			0.12 <sup>b</sup>			0.08 <sup>b</sup>
PA			–0.24 <sup>b</sup>			–0.17 <sup>b</sup>
GPYDQ			–0.30 <sup>b</sup>			–0.28 <sup>b</sup>
PIT			0.09 <sup>b</sup>			0.15 <sup>b</sup>
Model	0.40	0.16		0.32	0.11	
CYPDS			–0.23 <sup>b</sup>			–0.15 <sup>b</sup>
CFAI			–0.21 <sup>b</sup>			–0.19 <sup>b</sup>
Model	0.38	0.14		0.29	0.09	

ASC, academic and school competence; CBC, cognitive-behavioral competencies second-order factor; PA, pro social attributes second-order factor; GPYDQ, general positive youth development qualities second-order factor; PIT, positive identity second-order factor; CYPDS, total score of positive youth development; CFAI, total score of Chinese family functioning. <sup>a</sup>Standardized coefficients. <sup>b</sup>p<0.01. <sup>c</sup>Gender (0=male; 1=female). <sup>d</sup>Immigration status (only two levels were examined, i.e., 0=Hong Kong, 1=mainland China). <sup>e</sup>Receiving financial aids (0=no; 1=yes). <sup>f</sup>p<0.05.

intercourse with others. The lower rate might be explained by the influence of a different socialization environment (38). Socialization interacting with developmental characteristics in adolescence might influence the types and rates of risk behavior undertaken within specific cultures. With regards Chinese parenting and schooling that stress firm discipline and inhibition, Hong Kong students might have higher obedience, conformity and respect for social order, thereby contributing to the lower rate of delinquency than their Western counterparts (27).

In line with both Western and local studies (17–21, 25, 26), the present findings showed that individual psychosocial attributes, family functioning, and academic and school competence were negatively related to youth delinquency and problem behavior intention. Compared with student demographic characteristics, all these psychosocial correlates together showed higher predictive power of delinquency.

Hirschi (39) regarded social bonds in family and school as important sources of informal social control that, in turn, reduces youth delinquency. Both family and school can contribute to the creation of social bond through the provision of internalized, indirect and direct controls as well as need satisfaction (40). At the family level, local studies (18, 21, 24, 40, 41) consistently supported the notion that good family functioning is negatively related to frequency of problem

behavior. Since the Chinese parenting style is more controlling and restrictive than that in the West (40–42), strong family bonding would protect students from engaging in problem behavior. However, it should be noted that such controlling parenting style might contribute to lesser care and communication with children amongst Chinese parents (43). In this study, family communication was found to be an important protective factor of delinquency. Given that adolescence is a stage for independence, it is recommended that parents provide more democratic communication, which emphasizes autonomy and self-direction of their children in response to their individual needs (44). Since family influences on children might decline with age (6), family intervention work should be started as early as possible to buffer and shape their later adaptation.

At the school level, this study supported previous findings that poor academic performance was related to students' problem behavior (4, 8, 18, 21, 40). Academic achievement is long perceived in Chinese culture to bring about economic and social advancement as well as moral development (18). It is even regarded as the most pressing concern among Hong Kong adolescents (28). Against this background, the adverse influence of school failure may be greater for Hong Kong students (18). In particular, the study of Cheung (40) indicated the inverse relationship between teachers' negative evaluation and youth problem behavior. In academic-oriented schooling, students with poor academic performance might be easily labeled as failures and engage in delinquent subculture as a venue by which to relieve pressure from social strain. As commented by Cheung (40), students experiencing frustrations in their school experiences may have been due to a host of school-related factors, such as a difficult curriculum, heavy schoolwork, ineffective teaching, and strong competition among classmates. Thus, encouragement, understanding, and care from teachers are recommended to help students cope with the tough school reality.

At the individual level, similar to prior studies (21–23), the results of the present work showed that students with better psychosocial competencies were less likely to engage in problem behavior. In particular, compared with other psychosocial correlates, positive youth development qualities and pro social attributes were the highest protective factors against delinquency. Thus, this finding echoed the importance of positive youth development programs among adolescents. Through building individual skills and strengthening pro social connectedness among family, school and peers, positive youth programs have achieved great success in risk prevention in both local and Western contexts (45). In North America, Catalano et al. (46) found that around 96% of the 25 well-evaluated positive youth development programs reduced problem behavior, whereas in Hong Kong, Shek (23, 47) found that positive youth development was negatively correlated with adolescent problem behavior. However, an unexpected finding was found involving the positive association of CBC and PIT with delinquency and problem behavior intention. Perhaps, students who engaged in problem behavior might have “inflated” self-identities, thus over-estimating their abilities. They might regard their behavior as a rational

way, by which to gain popularity and recognition among deviant peers (4). However, when the total scores of positive youth development were used, a negative relationship was still revealed. The present findings suggest that there is a need to look at the different aspects of positive youth development and adolescent problem behavior.

According to both local and Western literature (8, 17, 19–21), significant gender differences were found in this study. Male students were more likely to engage in problem behavior compared with their female counterparts. In particular, they were more involved in violent activities, such as assault, gang fighting, and damaging others' properties (19, 20). One possible explanation of this finding is the differential gender socialization for boys and girls. While males are socialized to parenting practices that promote physically aggressive behavior, females are socialized to those that promote caring and closeness (48). However, as commented by Storvoll and Wichstrom (8), “whether or not gender differences were detected was highly dependent on the aspect of conduct problems considered” (p. 196). Although boys were more exposed to physical violence, theft, and vandalism (8, 19, 20), girls were found to be more likely to consider attempting suicide (19, 20). Some studies also indicated that girls engaged in more relational aggression than boys (48). In view of the finding that girls are more likely to engage in covert problem behaviors, parents and school personnel must be more sensitive and provide appropriate support to girls under distress. Consistent gender differences found on youth problem behaviors have provided insights on gender-specific prevention work.

Although the preset study has its merit of having a large sample from a group of schools in different districts, two limitations must be noted. First, this paper did not examine peer influence on youth delinquency. Numerous Western and local studies indicated that deviant peer influence is one of the strongest predictors of adolescent problem behavior (4, 18). In particular, Davis et al. (18) found that peer, family, and school together accounted for 58% of the variance in the delinquent behavior of Hong Kong adolescents. Therefore, more studies should be conducted to take this factor into account.

Second, this study only examined the pattern of problem behavior and psychosocial correlates at a particular grade level. To better understand the changing patterns of delinquency and the relative influence of psychosocial correlates by age and grade level, a longitudinal study is recommended to trace student development across the secondary education. This is what the extension phase of the Project P.A.T.H.S., a program financially supported by the Hong Kong Jockey Club Charities Trust, is attempting to do: to build up a 6-year longitudinal database to observe the development of Chinese adolescents in their secondary years.

In general, this study provides a descriptive profile of delinquency among Hong Kong early adolescents. Despite the general low reported rates of problem behavior, attention should be given to students' behaviors of cheating, speaking foul language, and drinking alcohol. In view of the predictive power of academic competence, family functioning, and general positive youth development on delinquency, it sheds light

on the collaboration of school and family for positive youth development work. It is suggested that school-based positive youth development programs, such as the Project P.A.T.H.S. might represent a promising direction for preventing problem behavior by strengthening the psychosocial competencies and family relationships of the participants (23, 47, 49–52).

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## Conflict of interest statement

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